

# *Why Do We Do It? Bridge and the Principle of Variable-Ratio reinforcement*

M A R I L Y N W H I T E

*John Gowdy penned an editorial in the January 1995 CMP which talked about people's motivations for playing competitive bridge. It certainly struck a chord with many of our readers. The author of this response was a professor of Liberal Arts and Science at George Brown College in Toronto, and her article was subsequently reprinted in a university psychology textbook.*

The January *Canadian Master Point* arrived just about the time that I was lecturing on behavioristic theory to my Nursing classes, and I was struck by what a brilliant idea it would be to use John Gowdy's question 'Why do we do it?' as a discussion topic, to see whether my students had grasped and could apply (I'm such a dreamer) the principles with which we had been working.

My students were not familiar with the game of bridge, so I explained briefly what competitive bridge was about (winning); I referred to the article that appeared a couple of years ago (I believe in the *Toronto Star*) that pointed out that the level of individual stress in a room full of tournament bridge players was roughly equivalent to, and possibly higher than, that of a neurosurgeon about to start on a difficult operation; and I read John's poignant questions aloud:

'Why do we suffer through the losses and the pain, and the sometimes unpleasant opponents or partners...?'

How that moved me! What memories were roused! Bottom boards, hurt feelings, insults received, drained self-esteem... Voice faltering with emotion, I summarized briefly John's experiences at 'a very important tournament' where a mixed crowd of Americans and Canadians twice broke out singing 'O Canada' when he and his team entered a bar, once when they had won, and once when they had lost.

My groundwork complete, I stood back and waited for eager replies to my reiterated question, 'So, why do they do it?'

My students appeared to have reached a level of boredom unusual even for them, but I persisted: 'Come on. This is so easy. Pretend it's an exam question: apply the principle of classical conditioning to explain why this person continues to play competitive bridge'.

At last a hand went up. 'Maybe because the playing of bridge has become associated with feelings of warmth and belonging?'

‘Yes!’ I cried, delightedly. ‘And what would have been the original unconditioned stimulus?’

‘The anthem sung by the crowd?’

‘Wonderful!’ More people were getting interested now. ‘And what was the unconditioned response?’

‘The good feelings?’

‘Yes! And... who can finish it?’

‘How about this, Miss? Bridge, originally a neutral stimulus, became associated by repeated pairings with strong positive emotions, and thus became in itself the conditioned stimulus, which had the power to elicit the positive feelings, which have now become conditioned responses!’ The student finished on a note of triumph, which indeed we all shared; but I was hungry for more.

‘Excellent.’ I responded briskly. ‘And let’s remind ourselves that a classically conditioned response is a powerful, automatic, and permanent piece of learning... Now, are we saying that, for this gentleman, bridge will always be a preferred pastime?’

Long pause.

‘No,’ the blonde girl in the corner finally ventured. ‘If he never ever at any time again had another positive experience, then the original learning would weaken and extinguish over time, and bridge would again become either a neutral or perhaps even a negative pastime, and he would give it up.’

‘That’s right. That would be the principle of extinction. Good. But what would happen if, after a long string of negative experiences, he should win even one game again?’

‘Then the whole original learning would be back, due to the principle of spontaneous recovery!’

Ah, it’s moments like this that make life worthwhile...

‘Okay, that’s really good. Now let’s ask ourselves why lesser mortals than Mr. Gowdy, who have never had the powerful aphrodisiac of public applause associated with the game of bridge, continue to play in spite of multitudinous horrible experiences. What, in fact, is Thorndike’s Law of Effect?’

Hands shot up. ‘That’s the law that states that behaviors followed by positive outcomes are strengthened, whereas behaviors followed by negative outcomes are weakened.’

‘Exactly. As we know, B.F. Skinner expanded on Thorndike’s ideas in the theory of Operant Conditioning, which holds that reinforcement of a behavior increases the probability that the behavior will be repeated, and punishment decreases that probability.’ I took a deep breath. ‘Now, what I want somebody to do is to explain why a person, such as a bridge player, would continue an activity that is expensive, time-consuming, frustrating, and often painful, in the face of repeated losses. We’re talking about your average, everyday player.’

Long silence.

‘But, Miss,’ (I love that form of address) ‘wouldn’t operant conditioning theory predict that a behavior that is punished that badly tends to decrease? Wouldn’t the person just, like, quit playing?’

‘One would certainly think so,’ I responded. ‘But simple observation at any bridge club would prove this not to be the case. These places are full of players whose behavior is repeatedly ‘punished’, so to speak, yet they show up week after week.’

I saw that this was going nowhere. ‘Let me jog your memory,’ I said, smiling (can’t anyone remember anything?). ‘In real life, do you get reinforced every time you perform a behavior? Do you get praised every time you make your bed, or brush your teeth, or eat your veggies? Does a golfer win every tournament? Does a chess player win every match? Of course not... What happens is that we get partial, or intermittent reinforcement; and schedules of intermittent reinforcement are simply rules that determine when a response will be reinforced. Does that ring any bells?’

Silence.

‘Remember when I said that intermittent schedules are very important in maintaining a learned behavior, and that there was one type of schedule that was incredibly powerful for this?’

‘Oh, Miss, I remember. You told us about that guy playing the slot machine that was rigged to pay off after every twentieth play. But the player wouldn’t know when the payoff would be — it might be twice in a row, and then not until 58 plays later, but it would average out to every twenty plays.’

‘That’s called a variable ratio schedule, and you said it was more powerful in maintaining behavior than the other kind, the fixed ratio (where you know the machine would pay off after every twenty plays exactly).’

‘You’ve got it. The thing is, when you have learned to expect a reinforcement, and you do not know when that reinforcement is coming, then you’ll keep trying practically forever. The big win could be just around the corner. It could be next time. It could be now.’

I looked benignly at the class. Had they learned anything?

‘I want you all to write a short essay for next week on some behavior you have learned through operant conditioning, and discuss the reinforcement schedule that you think maintains it. That’s it for now; it’s my bridge night, and I’m feeling lucky!’